

REMARKS

Claims 1-7 and 9-15 are pending in the subject application, of which claims 1, 14, and 15 are independent.<sup>1</sup> Claim 5 is canceled. Independent claims 1, 14, and 15 have been amended. Exemplary support for these amendments can be found, for example, at page 6 of the subject application.<sup>2</sup> Favorable reconsideration and further examination are respectfully requested.

Rejections under 35 U.S.C. § 103

Claims 1-7 and 9-15 were rejected over U.S. Patent Publication No. 2002/0089065 (Fujimoto) in view of U.S. Patent Publication No. 2002/0011919 (Ito), U.S. Patent No. 6, 475, 604 (Fujii), or U.S. Patent No. 6,172,592 (Inoue), as evidenced by U.S. Patent No. 3,839,110 (Shankoff).

Independent claim 1 is shown below.

1. A method comprising:  
forming a first electrode and a second electrode made from a first material on a base body made from a second material; and  
immersing the base body, the first electrode, and the second electrode in an etching solution directly after having formed the first and the second electrode on the base body, wherein upon immersion at least a portion of the base body is chemically etched and wherein a resistance of the base body between the first electrode and the second electrode is adjusted;  
wherein the first material is etched by the etching solution, and wherein the first material is etched substantially less than the second material.

More specifically, Fujimoto describes a process of dipping a thermistor body in a solution in order to partially melt away its externally exposed surfaces and to thereby increase the

---

<sup>1</sup> The Examiner is urged to independently verify this recitation of the pending claims.

<sup>2</sup> This portion of the applicant's specification provides that an etching process takes place. For example, the paragraph describes that the contacts are made from a material that is (not) or significantly less attacked by the etching solution than the ceramic material. As an effect, the solderability of the external contacts remains unchanged. That is, this paragraph describes that an etching of the external contacts takes place, and the etching does not affect the solderability of the etched contacts. If no etching process took place, the remark that the solderability remains unchanged would have no meaning.

resistance between the outer electrodes.<sup>3</sup> Fujimoto is understood to describe an etching process in which both outer electrodes of a chip are dipped in a resist material and dried. The outer electrodes are then covered by a resist layer and placed in a basket with a solvent. The parts of the chip which are not covered by a resist layer are melted away, and the resist layers are then removed.<sup>4</sup> Fujimoto is also understood to describe an etching process in which the thermistor body is dipped in a solvent without first forming any resist layer thereon, and in which “the solvent 10 [is] of a kind such as a plating liquid which melts the thermistor body 32 but not the outer electrodes.”<sup>5</sup> Neither of these embodiments, nor Fujimoto as a whole describe or suggest chemically etching at least a portion of the base body, the first electrode, and the second electrode with an etching solution.

In the above-mentioned fabrication methods of Fujimoto, the electrodes are not chemically etched by an etching solution as recited in claim 1. As stated previously, in the first method, the electrodes are covered with a resist layer to avoid any etching of the electrodes by an etching solution. Not only does this method of Fujimoto expressly prohibit etching of the electrodes, applicant’s claim 1 further requires that the first electrode and the second electrode are immersed in an etching solution directly after having formed the first and the second electrode on the base body.<sup>6</sup> For example, because the immersion of the device is carried out directly after forming the electrodes on the base body, an intervening masking step (such as that disclosed in Fujimoto) is not possible.

---

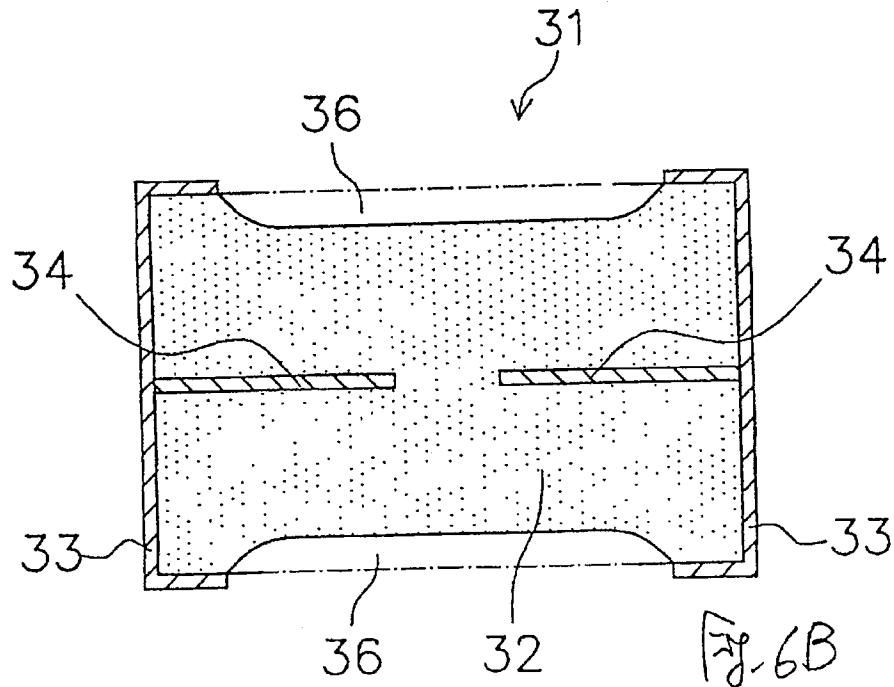
<sup>3</sup> Fujimoto, paragraph 0005.

<sup>4</sup> Id., paragraph 0030.

<sup>5</sup> See, e.g., id. at paragraph 0028 (emphasis supplied).

<sup>6</sup> Applicant’s claim 1 (emphasis supplied).

The Examiner relied upon FIG. 6B of Fujimoto (reproduced below) as allegedly showing that a portion of the electrode 33 is exposed to an etching solution when the etched portion 36 of the body reaches the electrodes.<sup>7</sup>



However, FIG. 6B is understood to relate to the Fujimoto's second fabrication method, which provides, *inter alia*, "the solvent 10 [is] of a kind such as a plating liquid which melts the thermistor body 32 but not the outer electrodes."<sup>8</sup> Accordingly, even if the plating solution were to reach the outer electrodes (which the applicant does not concede), Fujimoto discloses that the plating solution does not, in fact, etch the outer electrodes.

The Examiner relied upon Fuji, Ito, and Inoue in asserting that it would have been obvious to "use commonly used materials for electrodes of thermistor." However, no combination of these references can remedy the foregoing deficiencies of Fujimoto.

<sup>7</sup> Office Action, page 6.

<sup>8</sup> Fujimoto, paragraph 0028 (emphasis supplied).

The Examiner has relied upon Fuji, Ito, Inoue, and Shankoff to teach materials that could be used in the fabrication processes described in Fujimoto, and to teach that some electrode materials would be etchable at a lower rate than the body material. However, regardless of the materials described in these secondary references, Fujimoto describes fabrication methods in which the electrodes are either covered with a resist layer, or are impervious to the type of etching solution used. Accordingly, Fuji, Ito, and Inoue cannot be combined with Fujimoto to describe or to render obvious chemically etching at least a portion of the base body, the first electrode, and the second electrode with an etching solution. For the foregoing reasons, claim 1 is believed to be patentable over the applied art.

Independent claims 14 and 15 contain features that are similar to those recited in claim 1, and are believed to be patentable for at least the same reasons described above with regard to claim 1.

Each of the dependent claims is believed to define patentable features of the invention. Each dependent claim partakes of the novelty of its corresponding independent claim, in light of the foregoing amendments, and, as such, has not been discussed specifically herein.

It is believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this

Applicant : Christian Hesse  
Serial No. : 10/542,974  
Filed : January 24, 2006  
Page : 10 of 10

Attorney's Docket No.: 14219-0093US1 / P2003,0036  
US N

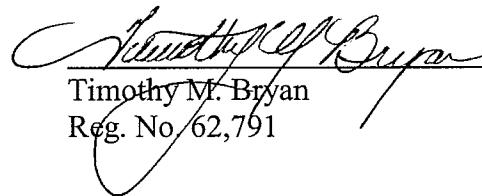
paper, and the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment.

In view of the foregoing amendments and remarks, Applicant respectfully submits that the application is in condition for allowance, and such action is respectfully requested at the Examiner's earliest convenience.

Please charge any additional fees, not already covered by check, or credit any overpayment, to deposit account 06-1050, referencing Attorney Docket No. 14219-093US1.

Respectfully submitted,

Date: March 8, 2010



Timothy M. Bryan  
Reg. No. 62,791

Fish & Richardson P.C.  
225 Franklin Street  
Boston, MA 02110  
Telephone: (617) 542-5070  
Facsimile: (877) 769-7945

22320002.doc